AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (Currently amended) A method of obtaining a digital code representative of a skin-covered body part, the method including:

acquiring, in a processing device, an image of the skin-covered body part, the image including a plurality of pixels, each pixel having an associated shade value in a range of shade values;

identifying a plurality of subsets of pixels from the plurality of pixels, each subset of pixels including at least two pixels having a common one of a plurality of designated shade values in the range of shade values;

for each of a plurality of combinations of pixels taken from the pixels in the subsets of pixels, determining a geometric measure of the pixels in said combination;

encoding the geometric measures into a digital code for the skin-covered body part; and

outputting the digital code from the processing device.

2. (Original) The method defined in claim 1, wherein said acquiring an image of the skin-covered body part is performed by a CMOS charge-coupled device.

3. (Original) The method defined in claim 1, wherein the image is derived from a live scan of the skin-covered body part pressed onto a platen.

4. (Original) The method defined in claim 1, wherein said identifying a plurality of subsets of pixels from the plurality of pixels includes identifying a first subset of pixels and identifying a second subset of pixels.

5. (Original) The method defined in claim 4, wherein said identifying a first subset of pixels includes:

identifying a first pixel having any of the designated shade values;

identifying a second pixel having the same designated shade value as the first pixel;

wherein the first subset of pixels includes said first and second pixels.

6. (Original) The method defined in claim 5, wherein said identifying a second subset of pixels includes:

identifying a third pixel having any of the designated shade values;

identifying a fourth pixel having the same designated shade value as the third pixel;

wherein the second subset of pixels includes said third and fourth pixels.

7. (Original) The method defined in claim 6, wherein identifying the first pixel includes identifying which pixel having the designated shade value is nearest a reference point in the image.

8. (Original) The method defined in claim 7, wherein identifying the second pixel includes identifying which pixel having the designated shade value is nearest the first pixel.

9. (Original) The method defined in claim 7, wherein identifying the second pixel includes identifying which pixel separated from the first pixel by at least a

minimum distance and having the designated shade value is nearest the first pixel.

10. (Original) The method defined in claim 7, wherein identifying the second pixel includes identifying which pixel having the designated shade value is second nearest the reference point.

11. (Original) The method defined in claim 7, wherein identifying the second pixel includes identifying which pixel separated from the first pixel by at least a minimum distance and having the designated shade value is second nearest the reference point.

12. (Original) The method defined in claim 11, wherein the reference point is a center of the image.

13. (Original) The method defined in claim 11, wherein the reference point is a corner of the image.

14. (Original) The method defined in claim 11, wherein the reference point is a salient feature of the image.

15. (Original) The method defined in claim 14, further including identifying the salient feature of the image.

16. (Original) The method defined in claim 1, further including consulting a database to obtain the designated shade values.

17. (Original) The method defined in claim 1, wherein the plurality of designated shade values are pre-determined and independent of the image.

18. (Original) The method defined in claim 1, further including selecting the plurality of designated shade values on a basis of a characteristic of the image.

19. (Original) The method defined in claim 1, wherein the designated shade values are grayscale values.

20. (Original) The method defined in claim 1, wherein the range of shade values includes 256 grayscale values.

21. (Original) The method defined in claim 1, wherein each said combination of pixels includes a respective first pixel and a respective second pixel, and wherein determining a geometric measure of the pixels in a particular one of the plurality of combinations includes determining a distance between the respective first pixel and the respective second pixel.

22. (Original) The method defined in claim 21, wherein said determining a distance between the respective first pixel and the respective second pixel includes determining a number of pixels separating the respective first pixel and the respective second pixel.

23. (Original) The method defined in claim 21, wherein said determining a distance between the respective first pixel and the respective second pixel includes determining a first number of pixels separating the respective first pixel and the respective second pixel along a first direction and determining a second number of pixels separating the respective first pixel and the respective second pixel along a second direction orthogonal to the first direction.

24. (Original) The method defined in claim 1, wherein each said combination of pixels includes at least three respective pixels.

25. (Original) The method defined in claim 24, wherein determining a geometric measure of the pixels in a particular one of the plurality of combinations includes determining an average distance among all pairs of the at least three respective pixels.

26. (Original) The method defined in claim 24, wherein determining a geometric measure of the pixels in a particular one of the plurality of combinations includes determining an area of a polygon constructed from the at least three respective pixels.

27. (Original) The method defined in claim 24, wherein determining a geometric measure of the pixels in a particular one of the plurality of combinations includes determining an average distance to a center of mass of the at least three respective pixels.

28. (Original) The method defined in claim 1, wherein each combination of pixels includes a plurality of pixels taken from the same subset of pixels.

29. (Original) The method defined in claim 1, wherein all the pixels in a particular one of the combinations of pixels are taken from the same subset of pixels.

30. (Original) The method defined in claim 1, wherein each combination of pixels includes at least two pixels taken from different subsets of pixels.

31. (Original) The method defined in claim 1, wherein said encoding the geometric measures into a digital code includes concatenating the geometric measures into the digital code.

32. (Original) The method defined in claim 1, further including encoding the designated shade values into the digital code.

33. (Original) The method defined in claim 1, further including encrypting the digital code.

34. (Original) The method defined in claim 1, wherein the skin-covered body part includes a finger tip.

35. (Original) The method defined in claim 1, wherein the skin-covered body part does not includes a finger tip.

36. (Original) The method defined in claim 1, wherein the skin-covered body part includes a nose tip.

37. (Original) The method defined in claim 1, wherein the skin-covered body part includes a palm of a hand.

38. (Original) The method defined in claim 1, wherein the skin-covered body part includes an ear.

39. (Original) A computer-readable storage medium containing a program element for execution by a computing device to implement a method of obtaining a digital code representative of a skin-covered body part, the program element including:

program code means for acquiring an image of the skin-covered body part, the image including a plurality of pixels, each pixel having an associated shade value in a range of shade values;

program code means for identifying a plurality of subsets of pixels from the plurality of pixels, each subset of pixels including at least two pixels having a common one of a plurality of designated shade values in the range of shade values;

program code means for determining, for each of a plurality of combinations of pixels taken from the pixels in the subsets of pixels, a geometric measure of the pixels in said combination;

program code means for encoding the geometric measures into a digital code for the skin-covered body part.

40. (Original) An apparatus for obtaining a digital code representative of a skin-covered body part, the apparatus including:

means for acquiring an image of the skin-covered body part, the image including a plurality of pixels, each pixel having an associated shade value in a range of shade values;

means for identifying a plurality of subsets of pixels from the plurality of pixels, each subset of pixels including at least two pixels having a common one of a plurality of designated shade values in the range of shade values;

means for determining, for each of a plurality of combinations of pixels taken from the pixels in the subsets of pixels, a geometric measure of the pixels in said combination;

means for encoding the geometric measures into a digital code for the skin- covered body part.

41-90. (canceled)